

REMARKS

Claims 10 and 22–30 are pending in this application. By this Amendment, claim 22 is amended and claims 13–21 are canceled. Claims 10 and 23, directed to non-elected subject matter, are withdrawn from consideration. Support for the amendments to the claims may be found, for example, in the original claims. No new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection of Claims 13–21

By this Amendment, claims 13–21 are canceled, rendering their rejection moot.

II. Rejection of Claims 22 and 24–30

The Office Action rejects claims 22 and 24–30 under 35 U.S.C. §103(a) over U.S. Patent No. 4,032,259 to Ward ("Ward") in view of U.S. Patent No. 6,165,295 to Wagaman ("Wagaman"). Applicants respectfully traverse the rejection.

Without conceding the propriety of the rejections, claim 22 is amended to be in independent form and to incorporate the subject matter of claim 13.

As conceded by the Office Action, Ward does not disclose "using the generator composition in a hydrogen generator to supply hydrogen to a proton membrane fuel cell

which would necessitate a [sic] anode operable [sic] connected to the generator." *See* Office Action, at the paragraph bridging pages 3 and 4. However, the Office Action asserts that Wagaman discloses that a rocket propellant can be used in a fuel cell which would necessitate an anode operably connected to the generator. *Id.* Based on this assertion, the Office Action concludes that "it would have been obvious to one of ordinary skill in the art at the time of invention to modify the composition of Ward by using [the composition] in a fuel cell to generate hydrogen as disclosed by Wagaman depending [on the] application of the fuel and to use as [a] fuel cell with a proton exchange membrane fuel cell as a well known, readily available fuel cell." *Id.*

The arguments presented in the Office Action mailed April 3, 2006 (and carried forward in the pending Office Action) to establish motivation to combine the Ward and Wagaman references to obtain the claimed device, can be summarized as follows:

- Premise 1: Ward discloses a rocket propellant.
- Premise 2: Wagaman teaches that a rocket propellant may be used in a fuel cell.
- Conclusion: Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to replace the rocket propellant disclosed by Wagaman with the rocket propellant disclosed by Ward to arrive at the claimed invention.

The conclusion is only valid if both premises are true. Therefore, in the Amendment filed August 1, 2006, Applicants argued that Premise 2 was false. However, it is evident from the Office Action's response to the arguments (see Office Action, top of page 5) that the arguments presented for invalidating the premise were not understood.

The Office Action's assertion that Wagaman "discloses that a rocket propellant can be used for a fuel cell" is incorrect, and mischaracterizes the disclosure of Wagaman. The Office Action cites Wagaman at column 3, lines 44–48 in support of its assertion, which states:

These objects are achieved in the present invention which provides a family of water-based gas-generating liquid compositions which may

be used in rocket propulsion, torpedo propellants, air bags, and other applications. Applications also include use in oxygen generators and in fuel cells (emphasis added).

This does not disclose that a rocket propellant can be used in a fuel cell. What Wagaman discloses is that its specific water-based gas-generating liquid composition can be used in a fuel cell. Wagaman does not teach or suggest that its composition is a rocket propellant. Therefore, the Office Action's assertion that Wagaman "discloses that a rocket propellant can be used for a fuel cell" is false and, thus, the showing of motivation predicated upon the assertion also fails. Accordingly, the Office Action fails to establish a *prima facie* case of obviousness, and the rejection must be withdrawn.

The Office Action now asserts that there is motivation to combine the references "because both deal with compositions with multiple, similar uses among them gas generation." *See* page 6, lines 3–5. Applicants respectfully disagree.

In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

Wagaman, which is directed to water-based gas-generating liquid compositions, is not in the field of the Applicants' endeavor, nor can it be said to be reasonably pertinent to the particular problem with which the inventors were concerned. As discussed in the present specification, the inventors were concerned with finding "solid compositions which generate hydrogen by combustion which are completely stable and which provide better yields by mass of hydrogen" to be used in miniature hydrogen fuel cells. *See* Specification at page 2, lines 17–23. Wagaman discloses compositions that are liquid, not solid as required by the instant claims, and Wagaman fails to teach or suggest a composition that generates hydrogen gas. One of ordinary skill in the art, faced with the particular concern discussed above at the time

of invention, would not have turned to the teachings of Wagaman for guidance. Therefore, Wagaman is non-analogous art, and cannot be properly combined with Ward in an obviousness rejection.

Additionally, although Ward broadly describes an $\text{NaBH}_4 + \text{Sr}(\text{NO}_3)_2$ pyrotechnic solid composition that produces H_2 gas upon combustion, Ward discloses no information about the quantity or the purity of H_2 gas produced that suggests modifying its composition for use in fuel cell technology.

Furthermore, one of the criteria that must be met to establish a *prima facie* case of obviousness is that the applied references, either separately or combined, must teach or suggest all of the claimed features. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Claim 22 requires "at least one electrochemical cell comprising an anode compartment operably connected to the pyrotechnic hydrogen generator." Ward and Wagaman, either separately or combined, fail to teach or suggest such a feature.

Claim 22 would not have been rendered obvious by Ward and Wagaman. Claims 24–30 depend from claim 22 and, thus, also would not have been rendered obvious by Ward and Wagaman. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 10 and 22–30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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